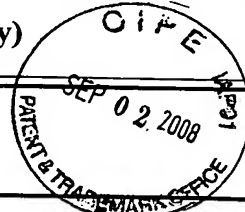


TRANSMITTAL OF APPEAL BRIEF (Large Entity)

Docket No.
FQ5-616

In Re Application Of: Shigeru Kurosawa



Application No.	Filing Date	Examiner	Customer No.	Group Art Unit	Confirmation No.
10/686,526	October 16, 2003	Dennis Rosario	21254	2624	3993

Invention: PORTABLE COMMUNICATION APPARATUS HAVING A CHARACTER RECOGNITION FUNCTION

COMMISSIONER FOR PATENTS:

Transmitted herewith is the Appeal Brief in this application, with respect to the Notice of Appeal filed on:
July 11, 2008

The fee for filing this Appeal Brief is: \$510.00

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- ☐ The Director has already been authorized to charge fees in this application to a Deposit Account.
- ☒ The Director is hereby authorized to charge any fees which may be required, or credit any overpayment to Deposit Account No. 50-0481. I have enclosed a duplicate copy of this sheet.
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Signature

Dated:

9/2/08

Frederick E. Cooperrider, Esq.
Registration No. 36,769

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(703) 761-4100

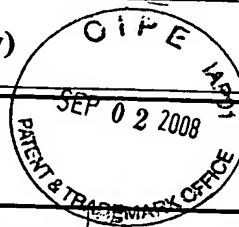
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TRANSMITTAL OF APPEAL BRIEF (Large Entity)

Docket No.
FQ5-616

In Re Application Of: Shigeru Kurosawa



Application No. 10/686,526	Filing Date October 16, 2003	Examiner Dennis Rosario	Customer No. 21254	Group Art Unit 2624	Confirmation No. 3993
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Invention: PORTABLE COMMUNICATION APPARATUS HAVING A CHARACTER RECOGNITION FUNCTION

COMMISSIONER FOR PATENTS:

Transmitted herewith is the Appeal Brief in this application, with respect to the Notice of Appeal filed on:
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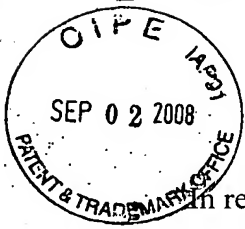
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Appellant's Brief on Appeal
S/N: 10/686,526

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES**



In re Application of

Shigeru Kurosawa

Serial No.: 10/686,526

Group Art Unit: 2624

Filed: October 16, 2003

Examiner: Dennis Rosario

For: PORTABLE COMMUNICATION APPARATUS HAVING A CHARACTER
RECOGNITION FUNCTION

Commissioner of Patents
Alexandria, VA 22313-1450

APPELLANT'S BRIEF ON APPEAL

Sir:

Appellant respectfully appeals the rejection of claims 1-20 in the Office Action mailed on April 11, 2008. A Notice of Appeal was timely filed on July 11, 2008.

I. REAL PARTY IN INTEREST

The real party in interest is NEC Corporation, assignee of 100% interest of the above-referenced patent application.

II. RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences known to Appellant, Appellant's legal representative or Assignee which would directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

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Docket FQ 5-616 (KAT.045)

III. STATUS OF CLAIMS

Claims 1-5, 10, 12-15, 18, and 20 stand rejected under 35 U.S.C. § 102(b) as allegedly anticipated by US Patent No. 5,912,705 to Saruwatari. Claims 6-8 and 17 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Saruwatari, further in view of US Patent No. 6,639,626 to Kubo et al. Claims 9, 11, 18, and 19 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Saruwatari, further in view of US Patent Publication No. 2002/0058536 to Horii et al.

All of the above rejections are being appealed.

IV. STATUS OF AMENDMENTS

A Request for Reconsideration Under 37 CFR §1.116 was filed on June 3, 2008. In the Advisory Action dated June 23, 2008, the Examiner indicated that the arguments in the Request for Reconsideration were not persuasive and that the rejections of record were maintained.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The basis in the specification for the claims is as follows:

1. (Rejected) A portable communication apparatus (10, Fig. 1A) comprising:
 - an image-capturing section (17, Fig. 2) for capturing an image depending on an operation of a shutter key and for sensing images in real-time (lines 3-8 of page 9);
 - a display (15, Fig. 4) that includes a viewfinder display that displays said real-time sensed images and that includes a reference frame (31, Fig. 4) that indicates a predetermined optimal size of characters to achieve a predetermined success rate for character recognition for a character positioned within the reference frame (Figs. 5A&5B; lines 7-11 of page 3; lines 21-24 of page 11); and
 - a character recognition section (205 of Fig. 2) for recognizing a character from a captured image (S180 of Fig. 6A; S530 of Fig. 7; S730 of Fig. 9; line 10 of page 10).

2. (Rejected) The portable communication apparatus according to claim 1, wherein said display further displays the captured image, wherein said display further comprises a character-size adjustment indicator that includes the reference frame such that a user moves said portable communication apparatus to image at least a portion of the characters of said captured image to fit approximately into said reference frame (S130, Fig. 3; Figs. 5A & 5B; lines 8-13 of page 11).

3. (Rejected) The portable communication apparatus according to claim 2, wherein the character-size adjustment indicator appears on the display when the portable communication apparatus is set to a character recognition mode (S120, Fig. 3; lines 5-8 of page 11).

4. (Rejected) The portable communication apparatus according to claim 2, wherein the character-size adjustment indicator is fixed on the display when said portable communication apparatus is set to a character recognition mode (S110, Fig. 3; lines 5-8 of page 11).

5. (Rejected) The portable communication apparatus according to claim 2, wherein the reference frame is a rectangle and is oriented horizontally with respect to the display (31, Fig. 4; lines 14-17 of page 11).

6. (Rejected) The portable communication apparatus according to claim 1, further comprising:

a timer (211, Fig. 2) that delays an image-capturing operation of the image-capturing section by a predetermined time period after an operation of the shutter key has been completed (S620-S640 of Fig. 8; lines 11-21 of page 4; lines 2-8 of page 20).

7. (Rejected) The portable communication apparatus according to claim 6, wherein the predetermined time period is set through an input device of the portable communication apparatus (14, Fig. 2; lines 18-20 of page 19).

8. (Rejected) The portable communication apparatus according to claim 2, further comprising:

a timer (211, Fig. 2) that delays an image-capturing operation of the image-capturing section by a predetermined time period after the operation of the shutter key has been completed (S620-S640 of Fig. 8; lines 11-21 of page 4).

9. (Rejected) The portable communication apparatus according to claim 1, further comprising:

a program memory (205, Fig. 2; lines 8-10 of page 10) storing a plurality of programs including a mailer program and a browser program; and

a processor (203, Fig. 2) for executing at least one program (lines 6-8 of page 10), wherein

the processor starts the mailer program when a string of the recognized characters represents an e-mail address (S290-S330, Fig. 6B; S740, Fig. 9; lines 4-26 of page 16),

the processor starts the browser program (S340-S380, Fig. 6B; S760, Fig. 9; lines 1-16 of page 17) when a string of the recognized characters represents a URL (uniform resource locator), and

the processor starts making a call at the phone number when a string of the recognized characters represents a phone number (S240-S280, Fig. 6A; S710, Fig. 9; line 21 of page 15 through line 9 of page 16).

10. (Rejected) The portable communication apparatus according to claim 1, further comprising:

a memory (205, Fig. 2) storing a plurality of recognition criterion each corresponding to a different type of character string (lines 13-18 of page 20);

wherein the character recognition section uses one of the plurality of recognition criterion to recognize a character from the captured image (Figs. 6A & 6B; lines 18-23 of page 20).

11. (Rejected) The portable communication apparatus according to claim 9, further comprising:

a memory (205, Fig. 2) storing a plurality of recognition criterion each corresponding to a different type of character string (lines 13-18 of page 20),

wherein the character recognition section uses one of the plurality of recognition criterion to recognize a character from the captured image (Figs. 6A & 6B; lines 18-23 of page 20).

12. (Rejected) A data input method in a portable communication apparatus having an image-capturing function of capturing an image, the method comprising:

capturing an image depending on an operation of a shutter key (S140, Fig. 6A); and

recognizing a character from a captured image to enter the character as input data (S180, Fig. 6A),

wherein said portable communication apparatus comprises a viewfinder display (15, Fig. 4) that displays images sensed in real-time and a reference frame (31, Fig. 4) that indicates an optimal size for characters to achieve a predetermined success rate for character recognition of a character positioned within the reference frame (lines 21-24 of page 11), and

wherein said recognizing a character recognizes a character positioned within said reference frame when said image is captured (S180, Fig. 6A).

13. (Rejected) A method for recognizing characters in a portable communication apparatus having an image-capturing device and a display (15, Fig. 4), the method comprising:

setting a character-size adjustment indicator (32, Fig. 4) on the display (S120, Fig. 8), wherein the character-size adjustment indicator comprises a reference frame having a size which provides a sufficiently high success rate in character recognition when one or more characters are approximately fitted into said reference frame (lines 7-11 of page 3; lines 21-24 of page 11);

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capturing an image depending on an operation of a shutter key when a character displayed on the display fits into the reference frame (S140, Fig. 6A; S500, Fig. 7; S130, S640, Fig. 8);

recognizing the character within the reference frame from a captured image (S180, Fig. 6A; S530, Fig. 7); and

displaying a recognized character in a predetermined display area on the display (S530, Fig. 7; lines 24-26 of page 11).

14. (Rejected) The method according to claim 13, wherein the capturing an image comprises:

image-processing the captured image to produce a processed image (S510, Fig. 7; S150, Fig. 6A);

clipping out a portion of the processed image within the reference frame (S170, Fig. 6A); and

recognizing the character from the clipped portion of the processed image (S180, Fig. 6A).

15. (Rejected) The method according to claim 13, wherein the capturing an image comprises:

image-processing a portion of the captured image within the reference frame to produce a processed image (S150, Fig. 6A); and

recognizing the character from the processed image (S180, Fig. 6A).

16. (Rejected) The method according to claim 13, further comprising:

repeating capturing an image, recognizing the character, and displaying a recognized character by sequentially selecting portions of a string of characters displayed on the display, each portion including a character which fits into the reference frame, wherein a plurality of recognized characters are displayed on the display by combining the portions in series, each of which includes a recognized character (Fig. 5D).

17. (Rejected) The method according to claim 13, wherein the capturing an image comprises delaying an image-capturing operation by a predetermined time period after the operation of the shutter key has been completed (lines 11-21 of page 4).

18. (Rejected) The method according to claim 13, wherein the capturing an image comprises:

storing a plurality of recognition criterion each corresponding to a different type of character string (Fig. 9);

determining a type of a character string (S240, Fig. 6A; S290 & S340, Fig. 6B);
and

recognizing a character within the reference frame based on a recognition criterion corresponding to the determined type of the character string (S530, Fig. 7; S730, Fig. 9).

19. (Rejected) The method according to claim 18, further comprising:

starting a mailer program when the recognized character string comprises an e-mail address type (S330, Fig. 6B; lines 1-20 of page 22);

starting a browser program when the recognized character string comprises a URL (uniform resource locator) type (S380, Fig. 6B; line 21 of page 22 through line 17 of page 23); and

making a call using a phone number represented by the recognized character string when the recognized character string comprises a phone number type (S280, Fig. 6A; lines 3-26 of page 21).

20. (Rejected) A program embodied in a computer readable medium (e.g., 206, Fig. 2; lines 2-13 of page 24) executable by a computer to recognize characters in a portable communication apparatus having an image-capturing device and a display, the program comprising:

instructions for setting a character-size adjustment indicator (31, Fig. 4) on the display (15, Fig. 4), wherein the character-size adjustment indicator comprises a reference frame having a size which provides a sufficiently high success rate in character recognition
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when one or more characters are approximately fitted into said reference frame (lines 7-11 of page 3; lines 21-24 of page 11);

instructions for capturing an image depending on an operation of a shutter key when a character displayed on the display fits into the reference frame (S140, Fig. 6A);

instructions for recognizing the character within the reference frame from a captured image (S180, Fig. 6A); and

instructions for displaying a recognized character in a predetermined display area on the display (15a, Fig. 4; S200, Fig. 6A).

Appellant's Brief on Appeal
S/N: 10/686,526

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Appellant presents the following issues for review by the Board of Patent Appeals and Interferences:

GROUND #1: THE ANTICIPATION REJECTION FOR CLAIMS 1-5, 10, 12-15, 18, AND 20, AS BASED ON SARUWATARI;

GROUND #2: THE OBVIOUSNESS REJECTION FOR CLAIMS 6-8 AND 17, AS BASED ON SARUWATARI, AS MODIFIED BY KUBO; AND

GROUND #3: THE OBVIOUSNESS REJECTION FOR CLAIMS 9, 11, 18, AND 19, AS BASED ON SARUWATARI, AS MODIFIED BY HORII.

VII. ARGUMENTS

GROUND #1: THE ANTICIPATION REJECTION FOR CLAIMS 1-5, 10, 12-15, 18, AND 20, AS BASED ON SARUWATARI

The Examiner alleges that Saruwatari anticipates claims 1-5, 10, 12-15, 18, and 20.

Appellant submits, however, that there are elements of the claimed invention which are neither taught nor suggested by Saruwatari and that the rejections of record fail to establish a *prima facie* obviousness rejection.

The Anticipation Rejection Based on Saruwatari

Appellant points out that the rejection of record fails to establish a *prima facie* rejection, since the references cited do not teach all elements of the claimed invention.

More specifically, in the first paragraph on page 3 of the latest Office Action, relative to the rejection for claim 1, the Examiner alleges that the reference frame “ ... (*“small area” in col. 2, lines 21-24 as shown in fig. 4B as num. 42) that indicates a predetermined optimal size (or represents a “great number of pixels, i.e., high resolution” in col. 2, lines 25-32 or can be adjusted to a larger size as shown in fig. 4B, SS6:42 and smaller size in fig. 4B: SS7-42 as desired by a user represented in fig. 5 as S12) of characters (in the high resolution image with characters) to achieve a predetermined success rate (or better accuracy of recognition as implied in col. 2, lines 9-15) for character recognition for a character positioned within the reference frame.*”

In contrast to the claimed invention, Saruwatari teaches an adjustable size area for the character recognition frame, based on detecting the movement of the user's eyeball and using such motions to define the character recognition area (see line 50 of column 3 through line 26 of column 4). Therefore, there is no predetermined reference frame in Saruwatari, let alone a predetermined reference frame predetermined to be optimal in size for character recognition, based on a success rate if the character is positioned within the reference frame.

Thus, it can only be reasonably concluded that primary reference Saruwatari actually teaches against using the predetermined fixed size reference frame required to satisfy the plain meaning of the claim language of even the independent claims.

In the Response to Arguments on page 2 of the Advisory Action mailed on June 23, 2008, the Examiner points to the description at lines 21-24 of column 2 of Saruwatari. These lines recite: *"It is also an object of the present invention to provide a photographing apparatus designed to set a desired small area in the viewfinder of the camera and be capable of character-recognizing the image of the area."*

Appellant respectfully submits that this description merely refers to the area set by the user's gaze and does not refer to a predetermined area for character recognition such as used in the claimed invention. In this claimed invention, the predetermined area is designed to be an optimal size for success of character recognition and is not based upon the user's gaze to set the dimensions of that area. Moreover, in various embodiments, the optimal size will change based upon whether the mode has been set for email, phone, or URL mode, or the mode can be an automatic mode.

Stated slightly differently, in the method of Saruwatari, the user's gaze is used to define an outline area for character recognition within the image, so there clearly is no reference frame presented on the viewfinder. In contrast, as further described in various dependent claims such as dependent claim 2, in the method of the claimed invention, the character recognition region is predetermined as a reference frame displayed on the viewfinder and the user will move the device around to best fit the characters into this reference frame before recording the image. There is no predetermined reference frame displayed on the viewfinder in Saruwatari, let alone a predetermined reference frame that is designed to achieve a predetermined success rate for character recognition, as required by the independent claims.

None of the secondary references are relied upon to modify this technique in primary reference Saruwatari and so do not overcome this fundamental deficiency of the primary reference. Moreover, given that primary reference Saruwatari's principle of operation to set the desired viewfinder area for character recognition is based upon detection of the user's gaze, Appellant submits that modification of this technique in Docket FQ 5-616 (KAT.045)

Saruwatari to satisfy the plain meaning of the claim language of the independent claims would be improper under the holding of *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959), as described in MPEP § 2143.01: “*If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teaching of the references are not sufficient to render the claims prima facie obvious.*”

Hence, turning to the clear language of the claims, in Saruwatari there is no teaching or suggestion of: “... a display that includes a viewfinder display that displays said real-time sensed images and that includes a reference frame that indicates a predetermined optimal size of characters to achieve a predetermined success rate for character recognition for a character positioned within the reference frame”, as required by independent claim 1.

The advantage of this feature over the prior art methods is that character recognition is improved by having the user move the image to fill up, as much as possible, this pre-designated window within the display. This allows the limited resolution on small image devices, such as used on a cell phone, to best utilize the image information for purpose of character recognition processing. Primary reference Saruwatari does not address a portable communication apparatus and, even if it is considered to confront this problem, the method of defining the area of image data to be isolated for purpose of character recognition is clearly based upon an entirely different mechanism than that of displaying a pre-determined window into which the user will move the portion of interest for character recognition.

Relative to the rejection for claims 2 and 3, Appellant submits that the method of Saruwatari is based upon detecting the user's eyeball motion as the mechanism for defining the space for character recognition. Not only is this method fundamentally different from that of the present invention, Appellant submits that Saruwatari thereby teaches against using the claimed method.

Relative to the Examiner's response in paragraph 4 on page 4 of the Office Action, wherein the Examiner acknowledges that functional language describing an element within a device or apparatus must be evaluated, as per MPEP §2173.05(g), Appellant brings to the Docket FQ 5-616 (KAT.045)

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Examiner's attention that the latest rejection still improperly rejects claim 4 under the improper rationale that function language can be ignored.

Therefore, Appellant submits that claims 1-5, 10, 12-15, 18, and 20 are not anticipated by Saruwatari and that all pending claims are clearly patent over Saruwatari.

GROUND #2: THE OBVIOUSNESS REJECTION FOR CLAIMS 6-8 AND 17,
AS BASED ON SARUWATARI, AS MODIFIED BY KUBO

The Rejection Based on Secondary Reference Kubo for Claims 6-8 and 17

Relative to the rejection for claims 6-8 and 17, the Examiner relies upon the timer 75 of Figure 13 of Kubo, further alleging that such timer satisfies the requirement of these claims and that one having ordinary skill in the art would have modified primary reference Saruwatari "... because Kubo's teaching is able to avoid problems with quick moving objects in col. 1, lines 1-15 as can be encountered in Saruwatari's natural pictures of landscapes that inherently have quick moving objects such as animals."

In response, Appellant respectfully points out that the timing generators 72, 73 is described in lines 14-22 of column 13 of Kubo as simply generating driving control signals for the two image sensors 58, 63, further described as being "... clock signals, such as integration (or exposure) start/termination timing signals and read-out control signals (e.g., horizontal synchronizing signals, vertical synchronizing signals, and transfer signals), and outputs these signals to the image sensors 58 and 63 via drivers (not shown)."

However, Appellant submits that this description does not include any suggestion of a predetermined time delay after operation of the shutter key, as required by the plain meaning of the language of claims 6, 8, and 17.

In the second paragraph on page 3 of the Office Action, the Examiner states: "*The examiner believes that the rationale for using Kubo is reasonable, because Kubo provides a method that prevents blur due to motion of an object that can occur in Saruwatari since Saruwatari is also interested in "natural pictures" in col. 3, lines 35-44 that inherently have fast moving objects such as animals.*"

Appellant respectfully points out that preventing blur from fast moving objects will not be achieved by a time delay after operation of a camera shutter key, since blur will only be controlled by limiting the time exposure. Thus, this rationale would be inadequate as an explanation to add timing generators 72, 73 of Kubo to Saruwatari.

Further, Appellant submits that the timing operation described beginning at line 60 of column 9 of Kubo would not apply in the environment of primary reference Saruwatari since the primary reference does not have two CCD sensors.

Therefore, Appellant again submits that the rejection of record fails to provide a reasonable motivation to modify Saruwatari by adding a predetermined time delay after pressing the shutter key, particularly relative to a character recognition processing.

As explained at lines 14-22 of page 4 of the specification of the present application: *"Since the portable telephone device is usually small-sized and lightweight, clicking the shutter key causes its body to easily shake, so that the captured image becomes blurred, resulting in reduced character-recognition success rate. To prevent camera shake when clicking, an actual image capturing operation of the camera section 17 is activated a lapse of the predetermined time period after the shutter key has been clicked."*

Therefore, contrary to the concern in Kubo over blurring of fast moving objects, this feature of the present invention is related to the small size of the portable communication device (to which neither Saruwatari nor Kubo is directed), as used for attempting to take image data for character recognition and the user's inadvertent shaking of the small device after clicking the shutter key.

Therefore, Appellant again respectfully submits that the Examiner has fail to provide a reasonable rationale to modify primary reference Saruwatari, so that the rejection currently of record for claims 6-8 and 17 fails to establish a *prima facie* obviousness rejection.

GROUND #3: THE OBVIOUSNESS REJECTION FOR CLAIMS 9, 11, 18, AND
19, AS BASED ON SARUWATARI, AS MODIFIED BY HORII

The Examiner maintains the rejection based upon secondary reference Horii, because, as best understood, of the description in paragraph [0099] of Horii: “... *it is possible to easily use the calling function, the Internet connection, mail transmission, and other functions.*”

However, Appellant respectfully submits that Horii is non-analogous to primary reference Saruwatari. Saruwatari involves a camera, whereas Horii involves a mobile phone. Appellant submits that the Examiner's initial burden to establish a *prima facie* rejection is to provide a rationale to modify the primary reference. There would be no reason to modify the camera described in primary reference Saruwatari, since it is not a communication device, so there would be no need to modify this camera for the reason described in paragraph [0099] of the secondary reference as a substitution or improvement known in the art for cameras.

Moreover, Appellant submits that the Examiner's rationale is merely a circular argument wherein the reason for modification is simply because one would thereby have achieved the alleged benefit of having made the modification. Appellant submits that such circular reasoning clearly constitutes improper hindsight.

Appellant's Brief on Appeal
S/N: 10/686,526

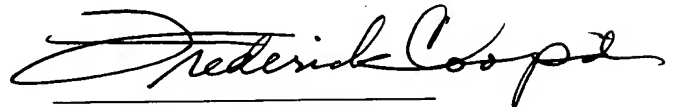
CONCLUSION

In view of the foregoing, Appellant submits that claims 1-20, all the claims presently pending in the application, are clearly enabled and patentably distinct from the prior art of record and in condition for allowance. Thus, the Board is respectfully requested to remove all rejections of claims 1-20.

Please charge any deficiencies and/or credit any overpayments necessary to enter this paper to Attorney Deposit Account number 50-0481.

Respectfully submitted,

Dated: 09/02/08



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VIII. CLAIMS APPENDIX

Claims, as reflected upon entry of the Amendment Under 37 CFR §1.111 filed on February 13, 2008:

1. (Rejected) A portable communication apparatus comprising:

an image-capturing section for capturing an image depending on an operation of a shutter key and for sensing images in real-time;

a display that includes a viewfinder display that displays said real-time sensed images and that includes a reference frame that indicates a predetermined optimal size of characters to achieve a predetermined success rate for character recognition for a character positioned within the reference frame; and

a character recognition section for recognizing a character from a captured image.

2. (Rejected) The portable communication apparatus according to claim 1, wherein said display further displays the captured image, wherein said display further comprises a character-size adjustment indicator that includes the reference frame such that a user moves said portable communication apparatus to image at least a portion of the characters of said captured image to fit approximately into said reference frame.

3. (Rejected) The portable communication apparatus according to claim 2, wherein the character-size adjustment indicator appears on the display when the portable communication apparatus is set to a character recognition mode.

4. (Rejected) The portable communication apparatus according to claim 2, wherein the character-size adjustment indicator is fixed on the display when said portable communication apparatus is set to a character recognition mode.

5. (Rejected) The portable communication apparatus according to claim 2, wherein the reference frame is a rectangle and is oriented horizontally with respect to the display.

6. (Rejected) The portable communication apparatus according to claim 1, further comprising:

a timer that delays an image-capturing operation of the image-capturing section by a predetermined time period after an operation of the shutter key has been completed.

7. (Rejected) The portable communication apparatus according to claim 6, wherein the predetermined time period is set through an input device of the portable communication apparatus.

8. (Rejected) The portable communication apparatus according to claim 2, further comprising:

a timer that delays an image-capturing operation of the image-capturing section by a predetermined time period after the operation of the shutter key has been completed.

9. (Rejected) The portable communication apparatus according to claim 1, further comprising:

a program memory storing a plurality of programs including a mailer program and a browser program; and

a processor for executing at least one program,

wherein

the processor starts the mailer program when a string of the recognized characters represents an e-mail address,

the processor starts the browser program when a string of the recognized characters represents a URL (uniform resource locator), and

the processor starts making a call at the phone number when a string of the recognized characters represents a phone number.

10. (Rejected) The portable communication apparatus according to claim 1, further comprising:

a memory storing a plurality of recognition criterion each corresponding to a different type of character string;

wherein the character recognition section uses one of the plurality of recognition criterion to recognize a character from the captured image.

11. (Rejected) The portable communication apparatus according to claim 9, further comprising:

a memory storing a plurality of recognition criterion each corresponding to a different type of character string,

wherein the character recognition section uses one of the plurality of recognition criterion to recognize a character from the captured image.

12. (Rejected) A data input method in a portable communication apparatus having an image-capturing function of capturing an image, the method comprising:

capturing an image depending on an operation of a shutter key; and

recognizing a character from a captured image to enter the character as input data,

wherein said portable communication apparatus comprises a viewfinder display that displays images sensed in real-time and a reference frame that indicates an optimal size for characters to achieve a predetermined success rate for character recognition of a character positioned within the reference frame, and

wherein said recognizing a character recognizes a character positioned within said reference frame when said image is captured.

13. (Rejected) A method for recognizing characters in a portable communication apparatus having an image-capturing device and a display, the method comprising:

setting a character-size adjustment indicator on the display, wherein the character-size adjustment indicator comprises a reference frame having a size which provides a

sufficiently high success rate in character recognition when one or more characters are approximately fitted into said reference frame;

capturing an image depending on an operation of a shutter key when a character displayed on the display fits into the reference frame;

recognizing the character within the reference frame from a captured image; and
displaying a recognized character in a predetermined display area on the display.

14. (Rejected) The method according to claim 13, wherein the capturing an image comprises:

image-processing the captured image to produce a processed image;
clipping out a portion of the processed image within the reference frame; and
recognizing the character from the clipped portion of the processed image.

15. (Rejected) The method according to claim 13, wherein the capturing an image comprises:

image-processing a portion of the captured image within the reference frame to produce a processed image; and
recognizing the character from the processed image.

16. (Rejected) The method according to claim 13, further comprising:

repeating capturing an image, recognizing the character, and displaying a recognized character by sequentially selecting portions of a string of characters displayed

on the display, each portion including a character which fits into the reference frame, wherein a plurality of recognized characters are displayed on the display by combining the portions in series, each of which includes a recognized character.

17. (Rejected) The method according to claim 13, wherein the capturing an image comprises delaying an image-capturing operation by a predetermined time period after the operation of the shutter key has been completed.

18. (Rejected) The method according to claim 13, wherein the capturing an image comprises:

- storing a plurality of recognition criterion each corresponding to a different type of character string;

- determining a type of a character string; and

- recognizing a character within the reference frame based on a recognition criterion corresponding to the determined type of the character string.

19. (Rejected) The method according to claim 18, further comprising:

- starting a mailer program when the recognized character string comprises an e-mail address type;

- starting a browser program when the recognized character string comprises a URL (uniform resource locator) type; and

making a call using a phone number represented by the recognized character string when the recognized character string comprises a phone number type.

20. (Rejected) A program embodied in a computer readable medium executable by a computer to recognize characters in a portable communication apparatus having an image-capturing device and a display, the program comprising:

instructions for setting a character-size adjustment indicator on the display, wherein the character-size adjustment indicator comprises a reference frame having a size which provides a sufficiently high success rate in character recognition when one or more characters are approximately fitted into said reference frame;

instructions for capturing an image depending on an operation of a shutter key when a character displayed on the display fits into the reference frame;

instructions for recognizing the character within the reference frame from a captured image; and

instructions for displaying a recognized character in a predetermined display area on the display.

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IX. EVIDENCE APPENDIX

(NONE)

X. RELATED PROCEEDINGS APPENDIX

(NONE)